

IN THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claim 1 (currently amended): A finely-divided powder spray apparatus ~~having~~  
comprising:

a spray nozzle pipe ~~for discharging~~ configured to discharge finely-divided powders from ~~the~~ a tip portion thereof together with a gas flow onto a member to be sprayed, ~~which is the spray nozzle pipe being disposed at a prescribed distance from said member and declined~~ inclined in a prescribed direction; and

a moving-speed control ~~means which controls~~ device configured to control a moving-speed of the tip portion of said spray nozzle pipe[[,]] based on a density distribution function indicating a density of the finely-divided powders deposited at each spray point on the surface of said member ~~to be sprayed~~ in a trial spray.

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Claim 2 (currently amended): A finely-divided powder spray apparatus according to claim 1, wherein said moving-speed control device obtains said density distribution function ~~is represented by a quadratic function of which indicates~~ indicating a reduction rate of a density of the deposited finely-divided powders ~~based on~~ as a quadratic function of a distance between a peak point of the density in said trial spray and a spray point at which an extension from said spray nozzle pipe intersects with said member to be sprayed.

Claim 3 (currently amended): A finely-divided powder spray apparatus according to claim 2, wherein said moving-speed control device obtains said quadratic function is composed of a X-axis quadratic function, which indicates a reduction rate of the density of the deposited finely-divided powders based on the distance between said peak point on the X-axis and said spray point, and a Y-axis quadratic function, which indicates a reduction rate of

the density of the deposited finely-divided powders based on the distance between said peak point on the Y-axis and said spray point.

Claim 4 (currently amended): A finely-divided powder spray apparatus according to claim 1, wherein the moving-speed of the tip portion of said spray nozzle pipe is decreased under control as ~~the~~ a reduction rate of the density of said deposited finely-divided powders is increased.

Claim 5 (currently amended): A finely-divided powder spray apparatus according to claim 2, wherein the moving-speed of the tip portion of said spray nozzle pipe is decreased under control as the reduction rate of the density of said deposited finely-divided powders is increased.

Claim 6 (currently amended): A finely-divided powder spray apparatus according to claim 3, wherein the moving-speed of the tip portion of said spray nozzle pipe is decreased under control as the reduction rate of the density of said deposited finely-divided powders is increased.

Claim 7 (currently amended): A finely-divided powder spray apparatus according to any one of claims 1-6, wherein ~~said member to be sprayed is~~ said spray nozzle pipe is configured to discharge spacers for liquid crystal displays onto a substrate of liquid crystal displays ~~and said finely-divided powders are spacers for liquid crystal displays.~~

Claim 8 (new): A finely-divided powder spray apparatus comprising:  
a spray nozzle configured to discharge finely-divided powders from a tip portion thereof together with a gas flow onto a member to be sprayed;  
a calculating unit configured to calculate a density distribution function indicating a density of the finely-divided powders deposited at each spray point on the surface of said member in a trial spray; and

a moving-speed control device configured to control a moving-speed of the tip portion of said spray nozzle based on the density distribution function.

Claim 9 (new): A finely-divided powder spray apparatus according to claim 8, wherein said calculating unit obtains said density distribution function indicating a reduction rate of a density of the finely-divided powders as a quadratic function of a distance between a peak point of the density in said trial spray and a spray point at which an extension from said spray nozzle intersects with said member.

Claim 10 (new): A finely-divided powder spray apparatus according to claim 9, wherein said calculating unit obtains said quadratic function including a X-axis quadratic function and a Y-axis quadratic function, the X-axis quadratic function indicating a reduction rate of a density of the finely-divided powders based on a distance between said peak point on an X-axis and said spray point, the Y-axis quadratic function indicating a reduction rate of a density of the finely-divided powders based on a distance between said peak point on a Y-axis and said spray point.

Claim 11 (new): A finely-divided powder spray apparatus according to claim 8, wherein the moving-speed control device decreases moving-speed of the tip portion of said spray nozzle as a reduction rate of the density of said finely-divided powders is increased.

Claim 12 (new): A finely-divided powder spray apparatus according to claim 9, wherein the moving-speed control device decreases moving-speed of the tip portion of said spray nozzle as the reduction rate of the density of said finely-divided powders is increased.

Claim 13 (new): A finely-divided powder spray apparatus according to claim 10, wherein the moving-speed control device decreases moving-speed of the tip portion of said spray nozzle as the reduction rate of the density of said finely-divided powders is increased.

Claim 14 (new): A finely-divided powder spray apparatus according to claim 8, wherein said spray nozzle is configured to discharge spacers for liquid crystal displays onto a substrate of liquid crystal displays.

Claim 15 (new): A finely-divided powder spray apparatus comprising:

a spray nozzle configured to discharge finely-divided powders from a tip portion thereof together with a gas flow onto a member to be sprayed;

calculating means for calculating a density distribution function indicating a density of the finely-divided powders deposited at each spray point on the surface of said member in a trial spray; and

moving-speed controlling means for controlling a moving-speed of the tip portion of said spray nozzle based on the density distribution function.

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